

Application No.: 10/584,785

Docket No.: 13156-00059-US  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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In re Patent Application of:  
Thorsten Johann et al.

Application No.: 10/584,785

Confirmation No.: 7342

Filed: August 6, 2006

Art Unit: 1764

For: METHOD FOR THE PRODUCTION OF  
BUTADIENE

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Examiner: Not Yet Assigned

**REQUEST FOR CORRECTED FILING RECEIPT**

Applicants hereby request that a corrected Filing Receipt be issued in the above-identified patent application. The official Filing Receipt received by Applicants has the following error:

Under the section "Domestic Priority data as claimed by applicant", it should read:

-- **This application is a 371 of PCT/EP05/014834 12/30/2004** --.

A marked-up copy of the Filing Receipt with the correction to be made indicated thereon is attached hereto.

Also enclosed is a copy of the front page of the PCT application (**PCT/EP05/014834**) which indicates that the PCT was filed on 13/30/2004.

Applicants additionally request that all pertinent U.S. Patent and Trademark Office records relating to the subject application be changed to reflect this correction.

Application No.: 10/584,785

Applicants believe no fee is due with this request. However, if a fee is due, please charge our Deposit Account No. 03-2775, under Order No. 13156-00059-US from which the undersigned is authorized to draw.

Respectfully submitted,

By   
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Enclosure: Front page of PCT



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
 United States Patent and Trademark Office  
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| APPL NO.   | FILING OR 371(c)<br>DATE | ART UNIT | FIL FEE REC'D | ATTY. DOCKET NO | TOT CLMS | IND CLMS |
|------------|--------------------------|----------|---------------|-----------------|----------|----------|
| 10/584,785 | 07/17/2006               | 1764     | 1030          | 13156-00059-US  | 4        | 1        |

CONFIRMATION NO. 7342

## CORRECTED FILING RECEIPT



\*OC00000025041396\*

23416  
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 WILMINGTON, DE 19899

Date Mailed: 07/26/2007

Receipt is acknowledged of this nonprovisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Filing Receipt Corrections. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).**

## Applicant(s)

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## Assignment For Published Patent Application

BASF Aktiengesellschaft, Ludwigshafen, GERMANY

**Power of Attorney:** The patent practitioners associated with Customer Number **23416**.

## Domestic Priority data as claimed by applicant

This application is a 371 of PCT/EP04/14834-12/12/2004-

## Foreign Applications

GERMANY 103 61 822.8 12/30/2003

12/30/2004

**If Required, Foreign Filing License Granted:** 03/20/2007

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US10/584,785**

**Projected Publication Date:** 08/02/2007

**Non-Publication Request:** No

**Early Publication Request:** No

**Title**

Method for the production of butadiene

**Preliminary Class**

585

## **PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES**

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

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B03/0719 PC

am 5.11.05

PF 55231/8B

(12) NACH DEM VERTRAG ÜBER DIE INTERNATIONALE ZUSAMMENARBEIT AUF DEM GEBIET DES  
PATENTWESENS (PCT) VERÖFFENTLICHTE INTERNATIONALE ANMELDUNG(19) Weltorganisation für geistiges Eigentum  
Internationales Büro(43) Internationales Veröffentlichungsdatum  
14. Juli 2005 (14.07.2005)

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11/167

(21) Internationales Aktenzeichen: PCT/EP2004/014834

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(25) Einreichungssprache: Deutsch

(26) Veröffentlichungssprache: Deutsch

(30) Angaben zur Priorität:  
103 61 822.8 30. Dezember 2003 (30.12.2003) DE(71) Anmelder (für alle Bestimmungsstaaten mit Ausnahme  
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jede verfügbare nationale Schutzrechtsart): AE, AG, AL,  
AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,  
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TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.(84) Bestimmungsstaaten (soweit nicht anders angegeben, für  
jede verfügbare regionale Schutzrechtsart): ARIPO (BW,  
GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG,  
ZM, ZW), eurasisches (AM, AZ, BY, KG, KZ, MD, RU,  
TJ, TM), europäisches (AT, BE, BG, CH, CY, CZ, DE, DK,  
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PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI,  
CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Veröffentlicht:

— mit internationalem Recherchenbericht

[Fortsetzung auf der nächsten Seite]

(54) Title: METHOD FOR THE PRODUCTION OF BUTADIENE

(54) Bezeichnung: VERFAHREN ZUR HERSTELLUNG VON BUTADIEN

(57) Abstract: The invention relates to a method for producing butadiene from n-butane, comprising the steps of A) providing an input gas flow a containing n-butane; B) feeding said input gas flow a containing n-butane into at least one first dehydrogenation zone and dehydrogenating n-butane in a non-oxidative catalytic manner, whereby a product gas flow b containing n-butane, 1-butene, 2-butene, butadiene, hydrogen, low-boiling secondary components, and optional steam is obtained; C) feeding the product gas flow b resulting from the non-oxidative catalytic dehydrogenation process and an oxygen-containing gas into at least one second dehydrogenation zone and oxidatively dehydrogenating 1-butene and 2-butene, whereby a product gas flow c containing n-butane, 2-butene, butadiene, hydrogen, low-boiling secondary components, and steam is obtained, said second product gas flow c having a higher butadiene content than product gas flow b; D) eliminating hydrogen, the low-boiling secondary components, and steam, whereby a C<sub>4</sub> product gas flow d essentially comprising n-butane, 2-butene, and butadiene is obtained; E) feeding the C<sub>4</sub> product gas flow d into a distillation zone and separating a butadiene/butane mixture as a valuable product flow e1 such that a flow e2 substantially comprising n-butane and 2-butene remains; F) redirecting flow e2 into the first dehydrogenation zone.(57) Zusammenfassung: Die Erfindung betrifft ein Verfahren zur Herstellung von Butadien aus n-Butan mit den Schritten A) Bereit-  
stellung eines n-Butan enthaltenden Einsatzgasstroms a; B) Einspeisung des n-Butan enthaltenden Einsatzgasstroms a in mindestens  
eine erste Dehydrierzone und nicht-oxidative katalytische Dehydrierung von n-Butan, wobei ein Produktgasstrom b enthaltend n-Butan,  
1-Buten, 2-Buten, Butadien, Wasserstoff, leichtsiedende Nebenbestandteile und gegebenenfalls Wasserdampf erhalten wird; C)  
Einspeisung des Produktgasstroms b der nicht-oxidativen katalytischen Dehydrierung und eines sauerstoffhaltigen Gases in min-  
destens eine zweite Dehydrierzone und oxidative Dehydrierung von 1-Buten und 2-Buten, wobei ein Produktgasstrom c enthaltend  
n-Butan, 2-Buten, Butadien, Wasserstoff, leichtsiedende Nebenbestandteile und Wasserdampf erhalten wird, welcher einen höheren  
Gehalt an Butadien als der Produktgasstrom b aufweist; D) Abtrennung von Wasserstoff, der leichtsiedenden Nebenbestandteile und  
von Wasserdampf, wobei ein C<sub>4</sub>-Produktgasstrom d im Wesentlichen bestehend aus n-Butan, 2-Buten und Butadien erhalten wird;  
E) Einspeisung des C<sub>4</sub>-Produktgasstroms d in eine Destillationszone und Abtrennung eines Butadien/Butan-Gemischs als Wertpro-  
duktstrom e1, wobei ein Strom e2 im Wesentlichen bestehend aus n-Butan und 2-Buten verbleibt. F) Rückführung des Stroms e2 in

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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In re Patent Application of:  
Thorsten Johann et al.

Application No.: 10/584,785

Confirmation No.: 7342

Filed: July 17, 2006

Art Unit: 1764

For: METHOD FOR THE PRODUCTION OF  
BUTADIENE

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Examiner: Not Yet Assigned

**REQUEST TO WITHDRAWAL PREVIOUSLY FILED**  
**REQUEST FOR CORRECTED FILING RECEIPT FILED MAY 16, 2007**

Sirs:

Applicants hereby request that the Request for Corrected Filing Receipt electronically filed with the USPTO on May 16, 2007 be withdrawn. The original Filing Receipt issued by the USPTO in connection with the above-identified patent application was correct and did contain any errors.

The official Filing Receipt should read as originally printed as follows:

**Under the section "Domestic Priority data as claimed by applicant", it should read:**

**-- This application is a 371 of PCT/EP04/14834, filed 12/30/2004 --.**

Please see enclosed cover page of the International Preliminary Report on Patentability.

The undersigned just noticed that the executed declaration contained the wrong filing date of the PCT (12/12/2004 instead of 12/30/2004). Applicant is in the process of executing a new Declaration.

Applicants additionally request that all pertinent U.S. Patent and Trademark Office records relating to the subject application be changed to reflect this correction.

Applicants believe no fee is due with this request. However, if a fee is due, please charge our Deposit Account No. 03-2775, under Order No. 13156-00059-US from which the undersigned is authorized to draw.

Respectfully submitted,

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